

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant(s): Backes	
Application No.: 10/781204	Group Art Unit: 2618
Filed: 2/18/2004	
Title: Apparatus for Adjusting Channel Interference Between Devices in a Wireless Network	Examiner: Haroon
Attorney Docket No.: 160-020	
Commissioner for Patents Mail Stop Appeal Brief-Patents P.O. Box 1450 Alexandria, VA 22313-1450	

**APPELLANT'S REPLY BRIEF**

This Appellant's Reply Brief is submitted in response to the Examiner's Answer dated June 14, 2007.

**I. Real Party in Interest**

As stated in the Appeal Brief.

**II. Related Appeals and Interferences**

As stated in the Appeal Brief.

**III. Status of the Claims**

As stated in the Appeal Brief.

**IV. Status of Amendments**

As stated in the Appeal Brief.

**V. Summary of Claimed Subject Matter**

As stated in the Appeal Brief.

**VI. Grounds of Rejection to be Reviewed on Appeal**

Claims 1-2 are rejected under 35 U.S.C. 102(e) as being unpatentable over U.S. Patent No. 7,136,665 (“Ida”).

VII. Argument

A. Ida fails to teach adjusting transmit power as a function of both distance to the mobile device and distance to the nearest neighbor fixed location device

It is well established that "[a]nticipation requires the disclosure in a single prior art reference of each element of the claim under consideration." *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984).

The Examiner's Answer relies on Ida at column 6, lines 26-31 to support the Examiner's argument that a fixed location wireless device adjusting its transmit power as a function of distance to the nearest neighbor fixed location device is known. In particular, the Examiner quotes "base transceiver station location information including at least base transceiver station forming in the area in which the mobile station 3 belongs and indicating the present location of at least one base transceiver station adjoining that base transceiver station." The Examiner correctly states that the cited passage of Ida supports the assertion that the locations of two adjoining base transceiver stations is ascertained. However, the Examiner is incorrect in assuming that the original transmission power settings were set based that ascertained distance between the adjoining base transceiver stations. It has long been known in the art to determine the locations of base stations in order to manage network operations. Location information can be utilized, for example, to display device location on a floor plan at a

management terminal, and to direct a particular base station and mobile device to become associated. Ida teaches use of location information to aid in handoff, i.e., migrating a mobile device from a first base station to a second base station. In particular, it is clear from the description at column 5, lines 16-35, that Ida uses the location information to identify the base station toward which the mobile device is moving in order to control that base station to ensure a soft handover to that base station. Note the following statement in the cited passage: “the present invention relates to control of the downlink transmission power **to a mobile station** at the base transceiver stations in the middle of such handover.” (emphasis added) There is no suggestion, either in the passages cited by the Examiner or elsewhere, that the location information be utilized to cause a base station to adjust transmit power based on distance to the nearest neighbor base station.<sup>1</sup>

It should be noted that the claimed limitation is not merely adjusting transmit power based on distance to the nearest neighbor fixed location device, although Ida fails to teach even that limitation. What is claimed even further distinguishes Ida because it is adjusting transmit power as a function of **both** distance to the mobile device and distance to the nearest neighbor fixed location device.

## **VIII. Conclusion**

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<sup>1</sup> It is worth noting that setting base station power based on neighboring base stations does not necessarily ensure soft handover (the goal of Ida), but does tend to reduce the likelihood of interference between base stations and enhance overall throughput.

Appellants submit therefore that the rejections of claims 1-2 under 35 U.S.C. 102(c) based on Ida are improper for at least the reasons set forth above. Appellants accordingly request that the rejections be withdrawn and the case put forward for allowance.

Respectfully submitted,

By:

/Holmes W. Anderson/

Holmes W. Anderson  
Reg. No. 37,272  
Attorney for Assignee

Date: July 24, 2007

McGuinness & Manaras LLP  
125 Nagog Park  
Acton MA 01720  
(978) 264-4001

*Appendix A - Claims*

1. (currently amended) Apparatus for adjusting transmission power of a first fixed location device capable of communicating with a plurality of mobile devices associated with the first fixed location device in a wireless communications environment via a radio frequency channel of which a first mobile device is the furthest mobile device from the first fixed location device, comprising:

logic for detecting that ~~another~~ a second fixed location device is also using the radio frequency channel as the first fixed location device, and that the second fixed location device is nearer to the first fixed location device than any other fixed location device operating on the radio frequency;

logic for ascertaining whether the second fixed location device is nearer to the first fixed location device than the first mobile device; and

logic for adjusting transmit power such that:

if the second fixed location device is nearer to the first fixed location device than the first mobile device, transmit power is set based on distance to the first mobile device; and

if the second fixed location device is not nearer to the first fixed location device than the first mobile device, transmit power is set based on distance to the second fixed location device.

2. (previously presented) The apparatus of claim 1 wherein the logic for adjusting transmit power does so in response to a message received from the another device, the message indicating power level backoff of the another device.

3. (withdrawn) Apparatus capable of communicating in a wireless communications environment via a radio frequency channel, comprising:

logic for detecting that at another device is also using the radio frequency channel;

logic for adjusting transmit power in response to a message received from the another device, the message indicating the transmitted power level of the another device.

4. (withdrawn) Apparatus capable of communicating in a wireless communications environment via a radio frequency channel, comprising:  
logic for maintaining a known devices table, wherein the known devices table includes an entry for each other device operating on the radio frequency channel, and wherein for each entry, a backoff value is recorded for each other device, the backoff value for each device indicative of an amount that the device's power has been adjusted;  
logic for setting the transmit power of the apparatus to a level equivalent to the apparatus' maximum transmit power minus the maximum of the backoff values recorded for each other device.

5. (withdrawn) The apparatus of claim 4 further comprising: logic for transmitting a backoff value indicative of the amount by which the apparatus has adjusted its transmit power.

***Appendix B - Evidence Submitted***

None.



*Appendix C - Related Proceedings*

None.